

ROCKY FLATS PLANT  
EMD OPERATING  
PROCEDURES MANUAL  
VOL I: FIELD OPERATIONS

Manual No.: 5-21000-OPS-FO  
New Manual No.: 4-11000-ER-OPS-FO  
Procedure No.: Table of Contents, Rev 60:  
Page: 1 of 4  
Effective Date: 02/09/94  
Organization: Environmental Management

THIS IS ONE VOLUME OF A SIX VOLUME SET WHICH INCLUDES:

VOLUME I: FIELD OPERATIONS (FO)  
VOLUME II: GROUNDWATER (GW)  
VOLUME III: GEOTECHNICAL (GT)  
VOLUME IV: SURFACE WATER (SW)  
VOLUME V: ECOLOGY (EE)  
VOLUME VI: AIR (AP)

**EG&G  
SUPERSEDED  
DOCUMENT**

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FO.05	Handling of Purge and Development Water	2	05/12/92

DOCUMENT CLASSIFICATION REVIEW WAIVER  
PER R.B. HOFFMAN, CLASSIFICATION OFFICE  
JUNE 11, 1991

ADP

A-SW-001284

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93-DMR-000677		2	11/01/93

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DCN 93.01	Tank Inspection Log	2	04/13/93
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DCN 92.02	Improve Tracking of Samples	2	12/08/92
DCN 93.01	Chain of Custody Record	2	02/10/93
DCN 93.02	Air Bill COC	2	05/18/93
93-DMR-000530		2	11/04/93
93-DMR-000667		2	11/20/93
•94-DMR-000143	Composite Sampling Clarification	2	02/11/94
FO.14	Field Data Management	2	05/12/92
DCN 92.01	EXPIRED (Update Bottle Codes and Lab Codes to Current Status)	2	Expired
DCN 92.02	Clarification of Biological Locations (07/08/92- Extended)	2	11/20/92
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DCN 92.04	Expired	2	Expired
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DCN 92.06	Clarify Description	2	09/28/92
DCN 92.07	Update Bottle Code List	2	09/28/92
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DCN 92.09	Major Form Revision	2	11/03/92
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FO.15	Photoionization Detectors (PIDs) and Flame Ionization Detectors (FIDs)	2	05/12/92

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FO.16	Field Radiological Measurements	2	05/12/92
DCN 92.04	EXPIRED (Seismic Lines)	1	Expired
DCN 92.05	Addition of HPGe	2	11/24/92
DCN 93.01	FIDLER Surveys	2	01/15/93
DCN 93.02	LUDLUM/FIDLER Guidance	2	06/29/93
FO.17	Determining Out-Of-Specification Analytical Results for Environmental Samples		To Be Added
FO.18	Environmental Sample Radioactivity Content Screening	1	05/12/92
DCN 93.01	Clarification of Procedure	1	01/11/93
FO.19	Base Laboratory Work	2	05/12/92
FO. 23	Management of Soil and Sediment Investigative Derived Materials (IDM)	0	01/11/94
94-DMR-000137	Training Requirements Clarification	0	01/28/94
•94-DMR-000148	Section FO.23 Modifications	0	02/09/94
FO.25	4-B11-ER-OPS-FO.25 Shipment of Radioactive Materials Samples	0	12/01/93
FO.27	4-BO1-ER-OPS-FO.27 Collection of Floor/Equipment Hot Water Rinsate Samples	0	07/26/93
DCN 93.01	VOC Preservatives	0	8/11/93
DCN 93.02	Fresh Water Samples	0	8/30/93

## DOCUMENT MODIFICATION REQUEST (DMR)

PAGE 1 of 2 *Selo*  
1-28-94Refer to 1-A01-PPG-001 for Processing Instructions.  
Printor Type All Information (Except Signatures).1. Date  
November 29, 1993  
25. DMR No. 94-DMR-0001432. Existing Document Number/Revision  
5-21000-OPS-FO.13, Rev. 2  
3. New Document Number or Document Number if it is to be changed with this Revision  
N/A4. Originator's Name/Phone/Pager/Location  
M. Burmeister / 5891 / D-4630 / T-891A  
5. Document Title  
Containerization, Preserving, Handling, and Shipping of Soil and Water Samples6. Document Type ☒ Procedure  
☐ Other \_\_\_\_\_  
7. Document Modification Type (Check only one)  
☐ New ☐ Revision ☒ Intent Change ☐ Nonintent Change ☐ Editorial Correction ☐ Cancellation

8. Item	9. Page	10. Step	11. Proposed Modifications
(1)	7 of 18	Sec. 6.2	<p>Add footnote to the third bullet item below the first paragraph:</p> <p>-Sample time and date <sup>3</sup></p> <p>Insert footnote at the bottom of the page:</p> <p>3 For composite samples, the time and date of the final aliquot shall be recorded on the sample label, the sample log form or field log book shall include the time and dates for the start and end times of the composite period.</p>

12. Justification (Reason for Modification, EJO #, TP #, etc.)

(1) Further clarification for composite sampling.

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JUNE 11, 1991

If modification is for a new procedure or a revision, list concurring disciplines in Block 13, and enter N/A in Blocks 14 and 15. If modification is for any type of change or a cancellation, organizations are listed in Block 13, then Concuror prints, and signs in Block 14, and dates in Block 15.

13. Organization	14. Print, Sign (if applicable)	15. Date (if applicable)
SME	Patty Kiefer <i>[Signature]</i>	1-28-94
SM	Karen Schoendaller <i>[Signature]</i>	2/2/94
RPM	Annette Primrose <i>[Signature]</i>	1-31-94
EOM	Marla Broussard <i>[Signature]</i>	2/2/94
EQS	Mark Brooks (RR) <i>[Signature]</i>	2/2/94
GAPM	Kaye Bentzen <i>[Signature]</i> 2/2/94	

16. Originator's Supervisor (print/sign/date)  
M. C. Broussard / *[Signature]* 1-26-9417. Assigned SME/Phone/Pager/Location  
P. A. Kiefer / 8698 / N/A / 080  
18. Cost Center  
3003  
19. Charge Number  
ENV-FO  
20. Requested Completion Date  
12/23/93  
21. Effective Date  
02/02/9422. Accelerated Review?  
Yes ☐ No ☒  
23. ORC Review  
Not Required24. Responsible Manager (print, sign, date)  
D. D. Stagg / *[Signature]* 02/03/94

RF-47940 (5/93)

FEB 04 1994

rec'd by ERM dcc

REVIEWED FOR CLASSIFICATION / UCN

BY N/A

DATE N/A

## DMR (continuation sheet)

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Refer to 1-A01-PPG-001 for Processing Instructions.

Printor Type All Information (Except Signatures).

25. DMR No. 94-DMR-000143 <sup>1-28-94</sup> ~~5020~~

2. or 3. Document Number/Revision	5-21000-OPS-FO.13, Rev. 2	5. Document Title	Containerization, Preserving, Handling, and Shipping of Soil and Water Samples
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8. Item	9. Page	10. Step	11. Proposed Modifications
(2)	12 of 18	Sec.6.4	<p>Add footnote to the fifth bullet item below the first paragraph:</p> <p>-Date and time of sample collection • 4</p> <p>Insert footnote at the bottom of the page:</p> <p>4 For composite samples, the time and date of the final aliquot shall be recorded for data entry required for the Rocky Flats Environmental Data Base System (RFEDS) database. The sample log form or field log book shall include the time and dates for the start and end times of the composite period.</p>
(3)	8 of 18	Sec.6.3	<p>Add to the end of the first paragraph:</p> <p>If errors are discovered in the COC, the sampler or Sample Manager may correct the mistake and initial <sup>ing</sup> adjacent to the correction. <i>Writeovers are not acceptable.</i></p> <p><i>by striking through the error with a single line</i></p> <p><i>RR</i> <i>02/02/94</i></p>

## 12. Justification (Reason for Modification)

(2) Further clarification for composite sampling.

(3) Further clarification for mistakes on COCs.

# CONTAINERIZATION, PRESERVING, HANDLING AND SHIPPING OF SOIL AND WATER SAMPLES

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Category 2		

## LIST OF EFFECTIVE PAGES

<u>Pages</u>	<u>Effective Date</u>	<u>Change Number</u>
1	9/ 15 /94	94-DMR-001670
1	3/1/92	NA
1A	11/09/93	93-DMR-000667
2	9/ 15 /94	94-DMR-001670
2	11/09/93	93-DMR-000667
2A	2/11/94	94-DMR-000143
2A	9/15/94	94-DMR-001670
3-5	3/1/92	NA
3 and 5	9/ 15 /94	94-DMR-001670
6	11/09/93	93-DMR-000667
7	9/ 15 /94	94-DMR-001670
7	3/1/92	NA
7	2/11/94	94-DMR-000143
8	2/10/93	DCN 93-01
8	2/11/94	94-DMR-000143
9	3/1/92	NA
10	2/10/93	DCN 93-01
11	3/1/92	NA
12	5/18/93	DCN 93-02
12	2/11/94	94-DMR-000143
15	9/ 15 /94	94-DMR-001670
Figure FO-13-2 (Added one page to existing 3)	7/22/94	DCN 92.01
Table A-1	9/ 15 /94	94-DMR-001670
Table A-1 (pages 1-2)	3/1/92	NA
Table A-1 (pages 3)	11/09/93	93-DMR-000667
Table A-1 (pages 4)	3/1/92	NA
Table A-2 to A-4	3/1/92	NA
Table A-5	9/ 15 /94	94-DMR-001670

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Category 2

Environmental Management

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The matrices discussed in this SOP for chemical, geotechnical, and radiological parameters are:

Soil Matrix - to include soils, sediments, and sludges (see SOP GT.8, Surface Soil Sampling, SOP SW.6, Sediment Sampling)

Water Matrix - to include surface water, groundwater and process liquids (see SOP GW.6, Groundwater Sampling; SOP SW.3, Surface Water Sampling, SOP SW.7, Collection of Tap Water Samples; SOP SW.8, Pond Sampling; and SOP SW.9, Industrial Effluent and Pond Discharge Sampling)

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Tables A-1 and A-2 show both CLP and non-CLP parameters of interest for water and soil matrices with the associated container size, preservatives (chemical and/or temperature); and holding times. Tables A-3 and A-4 show radiological parameters, containers, preservatives, and holding times for water and soil matrices. Table A-5 shows geotechnical parameters, containers, preservatives, and holding times for geotechnical soil and geosynthetic materials.

### 6.2 CONTAINER LABELING, DECONTAMINATION, AND FIELD PACKAGING

The sample bottles will be labeled by the sample manager or field sampling team. Collection time and date will be completed in the field by the sampler. The labels will indicate:

- Activity name and/or number
- Unique sample number
- Sample time and date
- Chemical preservative used
- Sample type (grab, composite)
- Analyses required



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- Filtered/unfiltered
- Comments or special precautions, as needed
- Samplers initials

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The sample label will be marked with a black waterproof pen. If needed, clear tape will be placed over labels before sampling to assure that the labels remain legible. If errors are discovered in the COC, the sampler or Sample Manager may correct the mistake by striking through the error with a single line and initialing adjacent to the correction. Writeovers are not acceptable.

Subsequent to sampling, the exterior of the sample containers will be decontaminated according to SOP No. 13, General Equipment Decontamination, and placed in coolers lined with a plastic bag dedicated for sample and sample container transportation. The temperature in the coolers will be maintained at approximately 4°C by adding sealed plastic bags containing blue ice (or an equivalent) to the coolers.

During the initial stages of field work, the sample manager should use a thermometer to verify that an adequate amount of blue ice is being used to maintain sample temperature at approximately 4°C.

### 6.3 CHAIN OF CUSTODY RECORD

Official custody of samples must be maintained and documented from the time of collection until the time that valid analytical results have been obtained or the laboratory has been released to dispose of the sample. The sampling team will be responsible for initiating the original chain of custody (COC) form and will sign and date this form when relinquishing custody of samples to the sample manager. Upon receipt, the sample manager will check the COC and all sample labels to ensure that all samples are accounted for and in good condition, and that no errors were made in labeling and/or completing the COC.

## CONTAINERIZATION, PRESERVING, HANDLING AND SHIPPING OF SOIL AND WATER SAMPLES

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- Chain of custody control number
- Signature and date blocks for personnel relinquishing or receiving sample custody
- Space for additional comments
- Name and phone number of emergency contact person
- Analysis requested
- Out of spec reporting

### 6.4 FIELD DATA DOCUMENTATION

All field descriptions, measurements, and observations will be recorded on the appropriate field data forms (see specific sampling SOPs and SOP FO.14, Field Data Management) in accordance with SOP FO.2, Field Data Documentation. The original data forms will be collected and filed on site by the designated subcontractor's data entry personnel. These forms are to be bound and submitted to EG&G with an accompanied transmittal letter at the completion of the task. This form is an example of data entries required for the Rocky Flats Environmental Data System (RFEDS) database. Data may also be recorded in field logbooks if desired. Field data will be filled out at the time a sample is taken and will include, but not be limited to, the following information:

- Sampling activity name and number
- Sampling point name and number
- Sample number\*
- Name(s) of collector(s) and others present
- Date and time of sample collection\*
- Sample container tag/label number (if appropriate)\*

Items will be documented on the COC Form.

\* For composite samples, the time and date of the final aliquot shall be recorded for data entry required for the Rocky Flats Environmental Data Base System (RFEDS) database. The sample log form or field log book shall include the time and dates for the start and end times of the composite period.

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